UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

JAN 0 9 2017

MEMORANDUM

SUBJECT: Draft QAPP Former Waterloo Industries Facility, Waterloo, Iowa – Reviewed

FROM: Diane Harris, Regional Quality Assurance Manager
Environmental Sciences & Technology Division

TO: Dan Gravatt, Project Manager
RCRA Corrective Action and Permits Section
Waste Remediation & Permitting Branch
Air and Waste Management Division

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The review of the subject document prepared by Environmental Resources Management, Inc., dated November 29, 2016, has been completed according to the "EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations," EPA QA/R-5 March 2001. This document was reviewed along with the Remedy Implementation Plan (RIP), dated November 28, 2016, submitted with this review, as they pertain to the QAPP.

Because the document was unsigned, it was reviewed as a draft, and the comments are outlined below. Critical comments identify issues which need to be addressed before the document can be approved. General comments identify opportunities for strengthening the document, but do not affect approval.

CRITICAL COMMENTS

1. Title and Signature Page: When the quality assurance project plan (QAPP) is ready for final approval, it will need to be submitted to quality assurance (QA) with the appropriate signatures.

2. Section 1.2.5, Parameters to Be Tested and Frequency: This section needs to specify what parameters are being requested to be analyzed in the indoor air, soil vapor, and remedial system effluent air monitoring samples collected.

3. Several sections throughout the QAPP reference the specific information addressed in: Table 1, Analytical Method Details, Table 2, Data Quality Objectives, Table 3, Minimum Data Package Contents and Hierarchal Bookmark Structure, and Table 4, Sampling and Analysis Summary, which do not include specific information as it pertains to the soil vapor and air samples. The specific information needs to be addressed in the tables or referenced in each section, as applicable.

4. Section 1.4.1.2, Field Activities: Under Subcontractors, the analytical laboratories who will analyze the soil, soil vapor, and air samples collected need to be identified.

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5. Section 2.3, Sample Handling and Custody: This section states, "Sample custody procedures will be consistent with Attachment 4 of the EPA Region V guidance entitled *Content Requirements for Quality Assurance Project Plans (1991).*" This document was unable to be located, and needs to be verified and referenced appropriately.

6. Section 2.4, Analytical Methods: Since some of the laboratory analytical methods to be utilized were not submitted with this QAPP, the procedures could not be verified.

7. Table 2, Data Quality Objectives, Step 3: This step states, "All VOC data will receive a Tier II data validation...." It is unclear what is meant by Tier II, and why only VOC data. If this should be the Level 2 data review referenced in Section 19.14.4.3, in the Test America QA Manual, then it needs to be verified, and clarification needs to be addressed.

GENERAL COMMENTS

8. Document, Page Format: It might be helpful to be in the format of X of Y.

9. Section 1.2.4, Soil Vapor and Indoor Air Sampling Design and Rationale: This section states, "Air and vapor samples will be collected according to the procedures described in Section 6.3.2 of the RIP." The dual phase vapor extraction (DPVE) system sample collection procedures are addressed in Section 6.3.3 of the RIP and should be referenced.

10. Section 1.4.1.1, General Project Management: References are made to Partner-in-Charge and Principal-in-Charge, which appear to be the same position and should be consistent throughout the QAPP.

11. Section 2.2, Sampling Methods Requirements: This section should reference that decontamination procedures are addressed in the RIP.

12. Section 2.8, Inspection/Acceptance Requirements for Supplies and Consumables: This section should include who will be responsible for inspection and acceptance.

13. Section 2.9, Non-Direct Measurements: This section specifies two additional databases that may be utilized and states that "Other publicly available government-sponsored databases or sources of information may also be used." If any additional acceptance criteria or any limitations of the data are required, it should be addressed.

14. Section 2.10, Data Management Plan: This section includes reference to electronic copies on CD-ROM or DVD, however, you should address any additional specifications, including computer hardware and/or software, that are to be utilized. Perhaps reference the laboratory QA manuals included in Appendices A and B for additional software and/or hardware that will be utilized.

15. Several references to Section 10.3 of the RIP are included throughout the QAPP; however, this section does not exist in the RIP. Perhaps these sections should reference Section 11.3, Reporting, in the RIP, which should be verified and corrected in the following sections:
    a. Section 1.5, Documentation and Records,
    b. Section 2.10.3, Reports,
    c. Section 3.2, Reports to Management,
    d. Section 4.4, Data Validation and Usability Reporting.

16. Table, Data Quality Objectives, Step 3: It would be helpful, if this step included, under the biochemical analysis: acetylene, carbon dioxide, oxygen, nitrogen, and hydrogen as specified in Table 4 and Table 5-3 in the RIP.

17. Table 4, Sampling and Analysis Summary: This table states that iron (ferrous) will be analyzed by method SM 3500Fe-D, which could not be found. Method SM 3500Fe-B was found, however, it should be verified and corrected, if applicable.

If you have any questions, please contact Rebecca Estep, Lead Reviewer, at x7598 or me at x7258.

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